REMARKS

In the Office Action mailed March 28, 2005, the Examiner rejected claims 1-91. In order to expedite allowance of the claims, Applicants have canceled claims 1-91 and added new claims 92-98. The cancellation of Claims 1-91 is without prejudice and Applicants reserve the right to pursue the subject matter of claims 1-91 in one or more continuing applications. The only claims now pending in the present application are claims 92-98, of which only claim 92 is independent.

Applicants' Technology

Claims 92-98 set forth the limitations of the presently claimed invention. In general, Applicants' technology is directed to a system for providing telephony service across a packet-switched network, such as the Internet, so that a user can place a call from a user device located on the Internet to a second user accessible through a Public-Switched Telephone Network (PSTN). A gateway, which serves as the interface between the Internet and the PSTN, communicates using a native protocol, such as H.323, SIP, MGCP, or other standards-based protocol. To avoid the user device having to communicate using the native protocol (which may be disadvantageous, as described below), a call client is downloaded onto the user device. The user device communicates both media and call-control data in a non-native protocol with a Packet-switched Telephony Service Provider, which communicates corresponding media and call-control data in the native protocol to and from the gateway. To provide support for billing and authorization for the call, a call logger and database are also included in the system.

The call-control data in the native protocol is likely to differ from the call-control data in the non-native protocol because the non-native protocol may include a proprietary, customized set of messages, while the native protocol is a standard protocol that the gateway supports. On the other hand, the media in the native protocol will likely not differ from the media in the non-native protocol

(e.g. the same voice signal will still be present). However, the non-native protocol may include proprietary functionality, such as media compression, encryption, and/or error correction, that the gateway might not support, but which can improve call robustness and efficiency. As a result, the user may communicate across the Internet and PSTN with a second user.

The PTSP's ability to communicate between native and non-native protocols provides several advantages in addition to those just described. First, because the user device transmits and receives call-control data through the PTSP (rather than directly to the gateway), the user device does not need to download the full native protocol stack, which could result in relatively long download times for the user. Second, use of the non-native protocol stack allows for proprietary, customizable messages to be used by a Packet-switched Telephony Service Provider, which could allow for improved functionality (e.g. see above) and easier tracking of calls for billing purposes. Navigation through firewalls and Network Address Translation (NAT) devices is also made easier (e.g. specific ports can be opened/mapped for communication). Third, the PTSP can support several native protocols to allow it to communicate with gateways located in different countries and operated by different gateway administrators. By communicating through the PTSP, the user device is able to communicate with a second user through any of these gateways, without having to support each and every native protocol that any particular gateway might use. Other advantages are set forth in Applicants' specification.

Differences Between Applicants' Technology and the Cited References

The Office Action mailed on March 28, 2005 rejected all previously pending claims under 35 U.S.C. §103(a) as being unpatentable over various combinations of six cited references. Although Applicants have canceled all previously rejected claims, rendering the previous rejections moot, Applicants now highlight differences between those cited references and the presently claimed invention, in an attempt to obtain allowance of the claims.

Jeong (U.S. Patent No. 6,819,664):

Jeong teaches a replacement for a Private Branch Exchange (PBX) using a LAN. The network interface connection unit 501 taught by Jeong clearly envisions that one of its connections is directly to the circuit-switched PSTN, as shown on the left side of 501 in Figure 5 of Jeong. In contrast, Applicants' claimed invention is directed to a PSTP in which both of its connections (to the call client and the gateway) are on a packet switched network utilizing protocols that operate on that packet switched network. Applicants' physically separated gateway communicates with the PSTN. Jeong has no description of translating between a **packet-switched non-native protocol** and a **packet switched native protocol.**

As shown from the wiring diagram in Figure 3 of Jeong, the primary elements for the user devices and phones reside on the same physical LAN. In Applicants' claimed invention, however, the user devices, PSTP, and gateways are all connected to each other via the public Internet, and thereby can be physically distributed anywhere in the world, instead of on the local LAN. Further, Applicants' claimed invention communicates **both media and call-control data** using packet-switched non-native protocols and packet-switched native protocols over the Internet. Jeong's summary of his invention at column 3, line 32 ("the private multi-media system performs a protocol conversion to couple the public telephone network to the local area network") illustrates that Jeong is not concerned with translating media and call-control data from one packet-switched protocol to another. Specifically, as stated in paragraph 2 of the March 28, 2005 Office Action, the native protocol in Jeong is assumed to be the PSTN signaling, which does not read on Applicants' invention as now claimed. The native protocol in Applicants' presently pending claims is not the PSTN, but rather industry standard protocols for communicating to a gateway through the Internet, such as SIP, H.323, or MGCP (page 3, line 14 and page 17, line 1).

In addition, Jeong provides no description for how the network interface connection unit 501 handles media. Jeong certainly does not disclose translating media from a non-native protocol to a native protocol, so that user devices utilizing non-native protocols can communicate with gateways to the PSTN. Specifically, Jeong envisions that the user devices are communicating in the native protocol with the gateway: "the IP phones 260 and 270 or the PC phone 250 preferably have an individual protocol ... Such a protocol equivalent to the terminal protocol is supported by the gateway modules 310-1 ~ 310-N". (Jeong, Column 5, lines 24-31). Jeong's description of the group call function in column 5 line 25, is a higher level protocol to control how devices access gateways, but once calls are placed between devices and gateways, a native protocol with direct communication between the devices and gateways is described.

Finally, Jeong's description includes neither call authorization using a database nor call log functionality, both of which would be important for operating a service in which calls are be billed. Applicants' invention includes a call logger to allow gateways to be utilized where the PSTP would not have access to accounting information generated by the gateway. Even in combination with other inventions cited, Applicants submits it would not be clear to one of ordinary skill in the art how to modify Jeong's teachings to log calls on the Internet.

Thomas (U.S. Patent No. 6,751,652):

The Office Action cited Thomas as teaching determining if a call request is authorized. Thomas consistently assumes that the user device communicates media packets directly with the gateway, if the call is authorized via the various proxy methods described. Thomas provides no teaching to account for a user device communicating across the Internet (or any other packet-switched network) using a non-native protocol to operate with a gateway using a native protocol.

Gurbani et al. (U.S. Patent No. 6,282,275):

Gurbani et al. describe a method for storing call logs on a central server, and accessing the call logs via the Internet. This call log functionality is entirely different from that provided by the call logger included as part of Applicants' claimed invention. First, the call log information acquired by Gurbani et al. is acquired on the circuit switched network and not from servers or processes on the Internet that are routing internet telephony calls. The duration of calls and the telephone numbers called are recorded by the circuit switches in Gurbani et al. Gurbani et al. state beginning at column 2, line 45, that "PSTN 110 upon receiving the call initiated from telephone station 102 forwards information of the call to signaling transfer point (STP) 114".

In order for a PTSP to utilize the methods described by Gurbani et al, calls would need to be sent to circuit switches with the equivalent of SS7 connections to service control points (SCP) and signal transfer points (STP) that the PTSP provider can access. For telephone calls from the Internet to international telephone numbers, that type of SS7 data is often not available. As set forth in Applicants' claimed invention, the call logger associated with the PTSP allows the call to be tracked and sent to any native protocol PSTN gateway anywhere in the world, so that the call is properly logged and billed.

Heath et al. (U.S. Patent No. 6,360,366):

The Office Action cited Heath et al. as teaching a call client downloadable to a user device. Heath is mainly concerned with "methods and systems for **maintaining** application programs on a client computer in a client-server network environment". (Heath abstract). Applicants' claimed invention, in contrast, does not depend on any particular method for maintaining the call client. For example, the call client in Applicants' invention could be downloaded once and used continuously without the need for updating. In fact, that is one possible advantage of using the non-native protocol on the call client, since it means the call client does not need to be updated as native protocol

standards evolve (such as the migration from H.323 v2 to v3, v4, etc.) Since the PTSP maintains the native protocol to communicate with gateways, the native protocol can be updated by changing files only at the PTSP.

Munger et al. (U.S. Patent No. 6,618,761):

The Office Action cited Munger et al. as teaching load balancing. As none of Applicants' amended claims are directed to load balancing, and as Munger et al. appears to be otherwise irrelevant, Applicants provides no further discussion of Munger et al. at this time.

Ress (WO publication 00/76107):

The Office Action cited Ress as teaching sending control signaling and converting it from a non-native to a native format, while sending media according to a native format. As none of Applicants' amended claims are directed to media being sent in a native format, and as Ress appears to be otherwise irrelevant, Applicants provides no further discussion of Ress at this time.

Conclusion

In light of the above amendments and remarks, Applicants submit that the present application is in condition for allowance and respectfully request notice to this effect. The Examiner is requested to contact Applicants' representative below if any questions arise or he may be of assistance.

Respectfully submitted,

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By: _____

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